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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,503	03/15/2004	Guido Gabriele Albasini	2110-111-03	1822

7590 09/15/2008
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EXAMINER

TRAN, KHANH C

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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09/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/801,503	Applicant(s) ALBASINI ET AL.	
	Examiner KHANH C. TRAN	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-19 and 21-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11, 13-15, 19, 21, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 16-18 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The Amendment filed 5/22/2008 has been entered. Claims 1-11, 13-19 and 21-24 are still pending in this Office action.

Response to Arguments

2. Applicant's arguments, see Applicants' Remarks, filed on 5/22/1008, with respect to the rejection(s) of claim(s) claims 1-2, 10-12, 14-18 and 21-24 under 35 U.S.C 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Park U.S. Patent 6,219,397 B1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11, 13-15, 19 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Park U.S. Patent 6,219,397 B1 (previously cited).

Regarding claim 11, in column 4 lines 15-45, Park teaches in FIG. 1, the frequency synthesizer 100 includes a reference divider 110, a phase-frequency detector 120, a charge pump 130, a loop filter 140, a voltage-controlled oscillator (VCO) 150, a

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multi-modulus pre-scaler 160, a third-order sigma-delta modulator 170, and a RF output buffer 180. In view of that, ***the phase-frequency detector 120, charge pump 130, and multi-modulus pre-scaler 160 constitute a control circuit claimed*** wherein multi-modulus pre-scaler 160 selects one of multiple modules in response to a scaling control data signal SC that corresponds to a modulation value claimed. Phase-frequency detector 120 produces a phase-error value claimed. Phase-frequency detector 120 and charge pump 130 detect the phase difference between the output signal F_1 of the reference divider 120 and the output signal F_2 of the prescaler 160, and generates a phase error signal that corresponds to a second data set claimed. The loop filter 140 that corresponds to a generator claimed generates a frequency control voltage V_c .

Regarding claim 13, as recited in claim 11 rejection, the phase-frequency detector 120, charge pump 130, and multi-modulus pre-scaler 160 constitute a control circuit claimed. The multi-modulus pre-scaler 160 that corresponds to first modifier claimed selects one of multiple modules in response to a scaling control data signal SC that corresponds to a modulation value claimed to output signal F_2 that corresponds to third data set claimed.

Regarding claim 14, phase-frequency detector 120 that corresponds to second modifier claimed detects the phase difference between the output signal F_1 of the reference divider 120 and the output signal F_2 of the prescaler 160, and produces the phase error value claimed.

Regarding claim 15, charge pump 130 that corresponds to a third modifier generates a phase error signal, that corresponds to a second data set claimed, in response to the phase error value generated by phase-frequency detector 120.

Regarding claim 19, claim is rejected on the same ground as for claim 11 because of similar scope.

Regarding claim 21, claim is rejected on the same ground as for claim 14 because of similar scope.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park U.S. Patent 6,219,397 B1.

Regarding claim 23, in column 4 lines 15-45, Park teaches in FIG. 1, the frequency synthesizer 100 includes a reference divider 110, a phase-frequency detector 120, a charge pump 130, a loop filter 140, a voltage-controlled oscillator (VCO) 150, a multi-modulus pre-scaler 160, a third-order sigma-delta modulator 170, and a RF output buffer 180. In view of that, the phase-frequency detector 120 corresponds to a circuit

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claimed for introducing a phase error between the output signal F_1 of the reference divider 120 and the output signal F_2 of the prescaler 160.

Park does not explicitly disclose a control circuit as claimed in the application claimed.

However, as recited in claim 11 rejection, Because phase-frequency detector 120 produces a phase-error value and phase-frequency detector 120 and charge pump 130 detect the phase difference between the output signal F_1 of the reference divider 120 and the output signal F_2 of the prescaler 160, and generates a phase error signal that corresponds to a second data set claimed, one of ordinary skill in the art at the time the invention was made would have recognized that phase-frequency detector 120, charge pump 130, and multi-modulus pre-scaler 160 constitute a control circuit claimed wherein multi-modulus pre-scaler 160 selects one of multiple modules in response to a scaling control data signal SC that corresponds to a modulation value claimed.

Regarding claim 24, claim is rejected on the same ground as for claim 23 because of similar scope.

Allowable Subject Matter

5. Claims 1-10 are allowed.

6. Claims 16-18, 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHANH C. TRAN whose telephone number is (571)272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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***/KHANH C. TRAN/
Primary Examiner, Art Unit 2611***